Frequently Asked Questions – Emissions Testing

Who do I contact with questions regarding stack testing?

Questions regarding stack testing should be directed to the Engineering Support Group of the Air Permits Division at (225) 219-3410.

What should be included in my test notification/test plan?

The test notification/test plan should include:

- Company name, agency interest number, permit number
- ID number of unit being tested
- Test date and company performing the testing
- Reason for conducting the test
- Pollutants being tested and the methods that will be used
- Operating parameters that will be recorded during the test

How must my equipment be operated during the performance test?

During performance testing, equipment should be operated, to the degree possible, at conditions most likely to challenge the emissions control measures of the facility (worst case emission conditions) with regard to meeting the applicable emission standard without creating an unsafe condition. When operating conditions are specified in the applicable emission standard, these should be followed. If operating conditions are not indicated in an individual standard, operating conditions should be developed as part of a site-specific test plan. The owner or operator is responsible for demonstrating that the facility is able to continuously comply with the applicable emission limits.

Where should I submit documents related to performance testing?

Documents related to performance testing should be sent to:

Lance Green, Environmental Scientist Manager
Louisiana Department of Environmental Quality
Air Permits Division - Manufacturing Section
P.O. Box 4313
Baton Rouge, LA 70821

Also, a copy of test notifications should be sent to the regional office where your facility is located. Notifications sent via the online stack test scheduler are automatically sent to both the Engineering Support Group AND the appropriate regional office. A separate paper notification is not necessary.

Do I have to submit results of performance testing that I conduct for my own purposes?

Performance testing, such as engineering studies conducted for the facility's own purposes, does not need to be submitted to the department. However, if the facility wishes to use the results for future compliance or permitting purposes, the test must be performed using approved methods, an accredited tester, and the results approved by the Engineering Support Group in the same manner as any required test.

What is the definition of a major engine overhaul?

An initial test is required after a major engine overhaul. "Major engine overhaul" means that the entire engine combustion section is dismantled, parts are replaced/reconditioned as needed, and the engine restarted. Any of the following may also constitute a major engine overhaul: the disassembly of cylinder heads; removal of intake and exhaust valve assemblies; removal of power piston bodies, pins, and connecting rods; disconnecting intake and exhaust manifolds; and disassembly of the fuel aspiration system such as carburetors and/or turbo chargers.

Can old test data be used to show compliance with new regulations or permit conditions that I become subject to?

Results from testing performed in the last three years may be accepted by the department on a case by case basis to show compliance with new regulations or testing requirements. The test must be performed using approved methods, an accredited tester, and the results approved by the Engineering Support Group in the same manner as any required test. Performance tests more than three years old may not be accepted.

Where can I find a list of LDEQ accredited stack testers and laboratories?

The LDEQ accredited stack testers and laboratories can be found at:

http://www.deq.louisiana.gov/portal/DIVISIONS/PermitSupportServices/LaboratoryAccreditation.aspx

Any questions concerning the accreditation of a tester should be directed to Laboratory Services at (225) 219-3181. Test results will not be accepted by the LDEQ if the test is not performed by an LDEQ accredited tester or laboratory. However, facility personnel may conduct their own performance testing or laboratory analysis without LDEQ accreditation.

Can sample analysis data submitted by an accredited lab be accepted and approved by DEQ even though the third party who collected the samples was not accredited?

LAC 33:I.4501.A.2 states, in pertinent part, "Laboratory data generated by commercial environmental laboratories that are not accredited under these regulations will not be accepted by the department."

If all of the data that is submitted was generated by the accredited laboratory, rather than by the third-party sampler, then the data are acceptable. Stated another way, if all the sampler did was take the sample, then whether he has some sort of accreditation is irrelevant.

Only if some of the data submitted to the Department was also generated by the third-party sampler does an issue arise. If the sampler generated the data by engaging in an activity meeting the definition of field test in LAC 33:I.4503. If so, then those data are acceptable. If the activity is not a field test, then the data generated by the unaccredited sampler will not be acceptable. However, the data generated by the accredited lab will still be acceptable. In this case, the Department would have to determine whether the lab data is adequate for the purpose submitted without the sampler's data.

Should companies who sample stack gas where samples are not sent to an accredited laboratory, but rather analysis is performed onsite, such as with a portable GC unit via 40 CFR 60 Appendix A Method 18 or a continuous pollutant analyzer such as is used in 40 CFR 60 Appendix A Methods 7E, 10, and 3A be required to possess LELAP accreditation when submitting data for Department use?

Yes. The party taking the samples in this situation is analyzing the samples and sending the data directly to DEQ. Thus, this party is not simply a sample collector, but is functioning as a laboratory, as defined in LAC 33:I.4503.A. If this party is performing the analysis for a third party for a fee or other compensation, this party is a commercial laboratory as defined in LAC 33:I.4503.A. In this situation, it does not qualify as a field test because:

The analyses produce data on multiple parameters. The definition of field test states that it results in "the measurement of a specific parameter" (emphasis supplied).

The analyses provide data on the constituents of the samples, which is unlike the examples given in the definition of field test, all of which relate to other characteristics of the sample or of the ambient conditions surrounding the sampling (soil classification, pH, temperature, flow rate).

Therefore, the data described is not acceptable to DEQ unless the party is accredited under LELAP.

Should companies who perform Continuous Opacity Monitoring System (COMS) certifications via Performance Specification 1 in Appendix B of 40 CFR 60 be required to possess LELAP accreditation when submitting data for Department use?

Yes. The analysis of this question is the same as that for the previous question. The certification procedure described in Performance Specification 1 in Appendix B of 40 CFR 60 is far too complex to be considered a field test as defined in LAC 33:I.4503.A, since it requires evaluation of multiple specifications for design, performance, and installation of the Continuous Opacity Monitoring System.

Should companies who perform Continuous Emissions Monitoring System (CEMS) certifications via the performance specifications listed in Appendix B of 40 CFR 60 be required to possess LELAP accreditation when submitting data for Department use?

Yes. The analysis of this issue is the same as that for the previous 2 questions. The certification procedure described in the performance specifications for CEMS certifications in Appendix B of 40 CFR 60 is far too complex to be considered a field test as defined in LAC 33:I.4503.A, since it requires evaluation of multiple specifications for design, performance, and installation of the Continuous Emissions Monitoring System.

What portable emission analyzers are approved by the Department for internal combustion engine testing?

Portable emission analyzers that have received approval from the Department for internal combustion engine testing include:

- Enerac 700, 2000, 3000 and 3000E
- Dean DAI 6000 and 6500
- Ecom-kl, Ecom A-Plus, Ecom AC, and Ecom J2KN
- Testo 350
- Lancom III

Analyzers are approved based on their capabilities to meet the specifications of the EPA test methods they are used to perform. If you wish to use a portable emission analyzer not listed here you must submit a request for approval for the Department's review.

What is acceptable alternative monitoring to a NOx CEMS for an NSPS Subpart Db boiler?

Industrial-commercial-institutional steam-generating units which are subject to NSPS Subpart Db, are required by 40CFR 60.48b(b) to continuously monitor NOx emissions. As provided in 40CFR 60.48b(g)(2) units with a capacity

between 100 MM BTU/hr and 250 MM BTU/hr may use an alternate to an in-stack NOx CEMS.

Described below is one option for alternate monitoring, which is commonly referred to as a "BACT box". It involves doing a test to establish an operating range, and then monitoring key parameters.

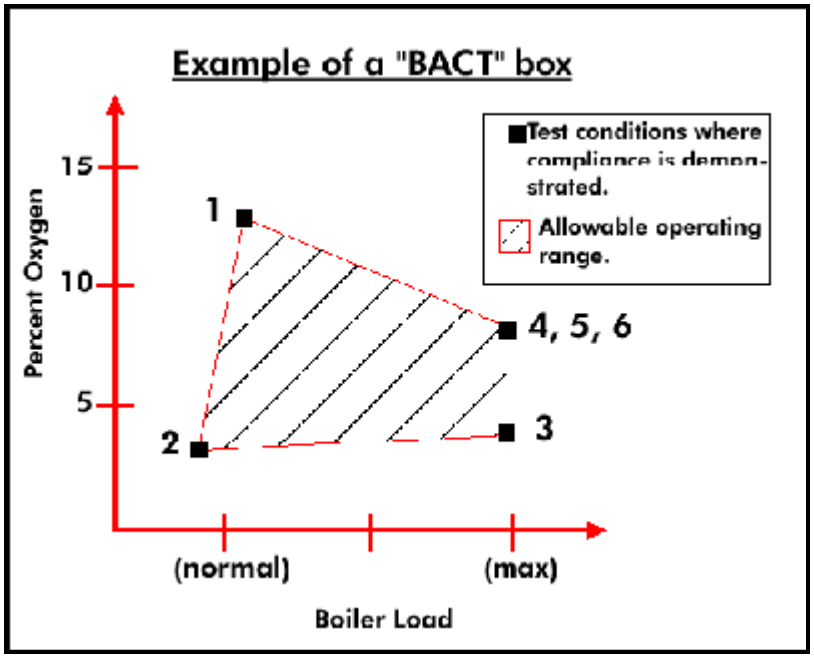
BACT Box Test

A continuous oxygen monitor is installed in the boiler flue, and certified according to 40 CFR Part 60, Appendix B, Performance Specification 3. Following installation, the oxygen monitor must be maintained by a quality assurance/quality control program per 40 CFR Part 60, Appendix F.

The emissions of nitrogen oxides (NOx) and carbon monoxide (CO) are determined in accordance with test methods and procedures set out in 40 CFR 60, Appendix A, Methods 7E and 10 respectively. A properly installed and calibrated continuous NOx monitor may be substituted for Method 7E.

The emission test is performed at four operating conditions:

1. Normal load with high oxygen
2. Normal load with low oxygen
3. Maximum load with low oxygen
4. Maximum load with high oxygen



If the emissions at the four corners of the box are in compliance, the area inside the box is established as an acceptable operating range. For a given boiler load,

the flue gas oxygen content is maintained within the shaded region on the graph. Alarms are set to sound when flue gas oxygen levels are outside of this range.

Compliance Test

Three replicate 1-hour test runs at maximum operating conditions are normally required by the permit. Therefore, two additional one-hour test runs are done at the maximum conditions. A total of six one-hour runs are necessary for the BACT test and compliance test.

30 Day NOX Test

Actual NOx emissions are monitored at usual loading conditions for 30 days with a CEM, as required by the permit and 40 CFR 60.46b.

Follow-Up

Within 45 days of the completion of the tests, the oxygen CEMS certification, 30-day NOx test, BACT box test, monitoring plan required by 40 CFR 60.49b(c), and compliance test are submitted to the DEQ Office of Environmental Assessment, Air Quality Assessment Division, Engineering Support for review.

After the monitoring plan is approved by the Engineering Section, the facility applies for a permit modification to incorporate the allowable oxygen limits into the permit.

Records of oxygen concentration, boiler loading, and predicted NOx emissions are maintained as specified in the approved monitoring plan. Oxygen concentration is monitored on an hourly rolling basis, unless another averaging time is specified in the monitoring plan or the permit.

Should any combustion equipment modifications be made such as different type burners, combustion air relocation, fuel conversion, tube removal or addition, etc., emissions correlation as described above shall be conducted within 60 days of attaining full operation after such modification.

What is the compliance date for the new abrasive blasting regulations?

On May 20, 2007, LDEQ promulgated new regulations for abrasive blasting operations that fall under certain SIC (source industrial classification) codes. These regulations are codified at LAC 33:III.Chapter 13, Subchapter F. New facilities must comply with these regulations upon startup of the facility. Existing facilities have one year to come into compliance. The compliance date for existing facilities is May 20, 2008.

What alternative blasting media have been approved by the Department under LAC 33:III.1327.B.5?

LAC 33:III.1327.A.2 requires abrasives to contain less than 10% (by weight) of fines that would pass through a No. 80 sieve. This size requirement is waived for certain types of blasting and blasting media under LAC 33:III.1327.B. LAC 33:III.1327.B.5 also allows the Department to approve exemptions for other abrasive media on a case-by-case basis.

On April 15, 2008, the Department approved an exemption for Dupont's Starblast XL blasting medium. However, any blasting conducted with this medium shall continue to be subject to all of the requirements of Chapter 13, Subchapter F, except for the size requirement of LAC 33:III.1327.A.2.

I am required to complete triennial testing according to LAC 33:III.2201. I completed my initial test in 2005. What is the timeframe for performing subsequent testing?

If you are required to perform triennial testing in accordance with LAC 33:III.2201.H.3 or 4, subsequent testing shall be performed between 35 and 37 months (3 years ±1 month) after the initial or previous Chapter 22 compliance test.

I am completing triennial testing for a turbine according to LAC 33:III.2201. How long do my test runs need to be?

Turbines required to perform triennial testing in accordance with LAC 33:III.2201.H.3 must comply with the methods specified in LAC 33:III.2201.G.5. However, the test runs are only required to last twenty minutes. While LAC 33:III.2201.G.5 specifies that three minimum one-hour tests shall be performed, it also specifies that stack tests shall be performed according to the emissions testing guidelines on the department's website. The department's emissions testing guidelines specifies that runs for turbine testing need only last at least twenty minutes. Therefore, testing for turbines under LAC 33:III.2201 shall consist of three runs, each at least 20 minutes in length.

What documentation is required to support compliance at 100% of the permitted maximum capacity if my unit was tested at less than 95% of permitted maximum capacity?

If the test results are at or below the manufacturer's documentation at the tested load then the manufacturer's documentation is acceptable to support compliance at 100% of the permitted maximum capacity. If the test results are not at or below the manufacturer's documentation at the tested load, other documentation will be accepted on a case-by-case basis.

What capacity is referenced in the following stack testing requirement: *The stack test's purpose is to demonstrate compliance with the emission limits of this permit and therefore must be conducted at greater than 80% of maximum permitted capacity*?

This requirement is referring to the maximum permitted capacity, not the name plate capacity. If the unit has operational limitations that prevent its capability to operate at 80% of the maximum permitted capacity then the permit should be modified to reflect the actual maximum operating capacity.